

Expression of a Human Insulin Precursor in P. Pastoris.ST25.txt SEQUENCE LISTING

<110> Laboratorios Beta S.A.

<120> 52071-4

<130> 52071.00004

<160> 26

<170> PatentIn version 3.1

<210> 1

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial Sequence: Synthetic Primer

<400> 1

tcacacctgg tggaagctct ctacctagtg tgcggg

<210> 2

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial Sequence: Synthetic Primer

<400> 2

Page 1

36

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Expression of a Human Insulin Precursor in P. Pastoris.ST25.txt
ggtcttgggt gtgtagaaga agcctcgttc cccgcacact aggta
<210> 3
<211> 39
<212> DNA
<213> Artificial Sequence
<220>
<223> Artificial Sequence: Synthetic Primer
<400> 3
tttgtgaacc aacacctgtg cggctcacac ctggtggaa
                                                                      39
<210> 4
<211> 45
<212> DNA
<213> Artificial Sequence
<220>
<223>
      Artificial Sequence: Synthetic Primer
<400>
gctggtacag cattgttcca caatgccacg cttggtcttg ggtgt
                                                                      45
<210> 5
<211> 52
<212> DNA
<213> Artificial Sequence
<220>
<223> Artificial Sequence: Synthetic Primer
<400>
ctagttgcag tagttctcca gctggtagag ggagcagatg ctggtacagc at
                                                                      52
```

| • | | |
|-----------------|--|-------|
| <210> | Expression of a Human Insulin Precursor in P. Pastoris.ST25. | txt |
| <211> | 162 | |
| <212> | DNA | |
| <213> | Artificial Sequence | |
| <220> | | |
| <223> | Artificial Sequence: complete synthetic insulin precursor ob d by PCR using human insulin sequence as original source | taine |
| <400> tttgtg | 6 paacc aacacctgtg cggctcacac ctggtggaag ctctctacct agtgtgcggg | 60 |
| gaacga | aggct tcttctacac acccaagacc aagcgtggca ttgtggaaca atgctgtacc | 120 |
| agcato | tgct ccctctacca gctggagaac tactgcaact ag | 162 |
| <210> | 7 | |
| <211> | 50 | |
| <212> | DNA | |
| <213> | Artificial Sequence | |
| <220> | | |
| <223> | Artificial Sequence: Synthetic Primer | |
| <400> acttgg | 7 Ittga agctttgtac ttggtttgtg gtgaaagagg tttcttctac | 50 |
| <210> | 8 | |
| <211> | 50 | |
| <212> | DNA | |
| <213> | Artificial Sequence | |
| <220> | | |
| <223> | Artificial Sequence: Synthetic Primer | |
| <400> agaagt | 8 acaa cattgttcaa cgatacctct cttagtcttt ggagtgtaga Page 3 | 50 |

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Expression of a Human Insulin Precursor in P. Pastoris.ST25.txt

| <210> | 9 | |
|-----------------|---|----|
| <211> | 33 | |
| <212> | DNA | |
| <213> | Artificial Sequence | |
| | | |
| <220> | | |
| <223> | Artificial Sequence: Synthetic Primer | |
| <400> acactt | 9 gtgt ggttctcact tggttgaagc ttt | 33 |
| <210> | 10 | |
| <211> | 66 | |
| <212> | DNA | |
| <213> | Artificial Sequence | |
| | | |
| <220> | | |
| <223> | Artificial Sequence: Synthetic Primer | |
| <400> ttactc | 10 gagt tagttacagt agttttccaa ttggtacaaa gaacagatag aagtacaaca | 60 |
| ttgttc | | 66 |
| <210> | 11 | |
| <211> | 36 | |
| <212> | DNA | |
| <213> | Artificial Sequence | |
| | | |
| <220> | | |
| <223> | Artificial Sequence: Synthetic Primer | |
| <400> ccgctc | 11 gaga agagatttgt taaccaacac ttgtgt | 36 |

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Expression of a Human Insulin Precursor in P. Pastoris.ST25.txt
<210>
       12
<211>
       162
<212>
       DNA
<213> Artificial Sequence
<220>
      Artificial Sequence: synthetic insulin precursor, obtained by PCR
        using human insulin sequence as original source
<400> 12
tttgttaacc aacacttgtg tggttctcac ttggttgaag ctttgtactt ggtttgtggt
                                                                       60
                                                                      120
gaaagaggtt tcttctacac tccaaagact aagagaggta tcgttgaaca atgttgtact
tctatctgtt ctttgtacca attggaaaac tactgtaact aa
                                                                      162
      13
<210>
<211>
       56
<212> DNA
<213> Artificial Sequence
<220>
<223> Artificial Sequence: Synthetic Primer
<400>
       13
cgcggatcca aaccatgaga ttcccatcta tcttcactgc tgttttgttc gctgct
                                                                       56
<210>
      14
<211>
      68
<212> DNA
<213> Artificial Sequence
<220>
      Artificial Sequence: Synthetic Primer
<223>
<400>
      14
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Page 5

| gttttg | ttcg ctgcttcttc tgctttggct gctcctgtta acactactac | | 60 |
|-----------------|--|------------|----|
| actgct | ca | | 68 |
| <210> | 15 | | |
| | 71 | | |
| <212> | DNA | | |
| <213> | Artificial Sequence | | |
| | | | |
| <220> | | | |
| <223> | Artificial Sequence: Synthetic Primer | | |
| <400> acgtcg | 15 aagt caccttccaa gtcagagtaa ccgataaccg cttcagctgg | gatttgagca | 60 |
| gtttcg | tctt c | | 71 |
| <210> | 16 | | |
| <211> | 66 | | |
| <212> | DNA | | |
| <213> | Artificial Sequence | | |
| | | | |
| <220> | | | |
| <223> | Artificial Sequence: Synthetic Primer | | |
| <400> gatgaa | 16 caac aaaccattat tagtagagtt agagaaaggc aaaacagcaa | cgtcgaagtc | 60 |
| accttc | | | 66 |
| <210> | 17 | | |
| <211> | 72 | | |
| <212> | DNA | | |
| <213> | Artificial Sequence | | |
| | | | |
| <220> | | | |

| <223> | Expression of a Human Insulin Precursor in P. Pastoris.ST25.txt Artificial Sequence: Synthetic Primer | • |
|-------------------|---|-----|
| <400> ccgctcg | 17 gaga gaaacaccct cttccttagc agcgatagaa gcgatagtag tgttgatgaa | 60 |
| caacaa | acca tt | 72 |
| <210> | 18 | |
| <211> | 267 | |
| <212> | DNA | |
| <213> | Artificial Sequence | |
| <220> | | |
| <223> | Artificial Sequence: synthetic sequence of alpha factor from S. erevisiae, obtained by PCR | C |
| <400> atgaga1 | 18 ttcc catctatctt cactgctgtt ttgttcgctg cttcttctgc tttggctgct | 60 |
| cctgtta | aaca ctactactga agacgaaact gctcaaatcc cagctgaagc ggttatcggt 1 | .20 |
| tactctg | gact tggaaggtga cttcgacgtt gctgttttgc ctttctctaa ctctactaat 1 | .80 |
| aatggti | ttgt tgttcatcaa cactactatc gcttctatcg ctgctaagga agagggtgtt 2 | 40 |
| tctctco | gaga agagaggc tgaagca 2 | 67 |
| <210> | 19 | |
| <211> | 44 | |
| <212> | DNA | |
| <213> | Artificial Sequence | |
| <220> | | |
| <223> | Artificial Sequence: Synthetic Primer | |
| <400> ggggato | 19 ccat atgctcgaga aaagatttgt gaaccaacac ctgt | 44 |
| <210> | 20 | |
| ∠211 _\ | 32 | |

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Expression of a Human Insulin Precursor in P. Pastoris.ST25.txt
<212> DNA
<213> Artificial Sequence
<220>
<223>
      Artificial Sequence: Synthetic Primer
<400>
      20
ttagaattcc cgggtctagt tgcagtagtt ct
                                                                      32
<210> 21
<211>
       30
<212> DNA
<213> Artificial Sequence
<220>
<223> Artificial Sequence: Synthetic Primer
<400> 21
tcactcgagc ggtctagttg cagtagttct
                                                                      30
<210> 22
<211> 28
<212> DNA
<213> Artificial Sequence
<220>
<223> Artificial Sequence: Synthetic Primer
<400> 22
gtcgtggttt ctcatagtag agtggaca
                                                                      28
<210>
      23
<211>
      18
<212> DNA
<213> Artificial Sequence
```

Expression of a Human Insulin Precursor in P. Pastoris.ST25.txt

```
<220>
<223> Artificial Sequence: Synthetic Primer
<400>
       23
ggtcatcact gctccatc
                                                                      18
<210> 24
<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Artificial Sequence: Synthetic Primer
<400>
      24
                                                                      19
agcagcacca gtggaagat
<210> 25
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223>
      Artificial Sequence: Synthetic Primer
<400> 25
gactggttcc aattgacaag c
                                                                     21
<210> 26
<211> 4
<212> PRT
<213> Saccharomyces cerevisiae
```

Expression of a Human Insulin Precursor in P. Pastoris.ST25.txt $<400>\ 26$ Lys Arg Glu Ala 1